<Personal>Retirement

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Professor NODA, Akira
Advanced Research Center for Beam Science
– Particle Beam Science –

On March 31, 2013, Dr. Akira Noda retired from Kyoto University after 22 years of service and was honored with the title of Professor Emeritus of Kyoto University.

Dr. Noda was born in Kyoto on August 28, 1948. He graduated from Faculty of Science, Kyoto University in 1971 and studied high energy physics under the supervision of Professor Emeritus Kozo Miyake in the Department of Physics, Graduate School of Science. In 1979, he received the doctoral degree of science for the thesis "Neutral Pion Photoproduction from Hydrogen at Forward Angles in the Energy Region between 450 MeV and 975 MeV". He was appointed Assistant Professor at Institute for Nuclear Study (INS), the University of Tokyo in 1976 and was appointed Professor at the Institute for Chemical Research, Kyoto University in 1991, directing the Accelerator Laboratory of Nuclear Science Research Facility. The laboratory was reorganized as Laboratory of Particle Beam Science in the Advanced Research Center for Beam Science in 2004, and he served as the first head of the center.

Throughout his academic career, Dr. Noda devoted himself to the development of the accelerators and the pursuit of high quality beams. At INS, he started his activity on accelerator and beam physics in a design work of a heavy ion synchrotron. He played a central role for designing of the synchrotron lattice and its magnets, which was really applied for the construction of Test Accumulation Ring for NUMATRON (TARN). After investigations on beam physics such as beam injection, accumulation and stochastic momentum cooling at TARN, he designed and constructed a heavy ion synchrotron-cooler ring, TARN II. Dr. Noda made an intense effort to construct a slow beam extraction system with 3rd order resonance at TARN II and invented a novel method of slow beam extraction with the use of RF knock out, which has been applied for real patient-treatments by synchronous irradiation with breathing at HIMAC in NIRS for the first time, which is now considered to be very important for a treatment of trunk of the body.

After he moved to ICR, he succeeded in the acceleration of proton by the 7 MeV linac and made important fundamental research in the accelerated beam properties. He also led the design and construction of the 100 MeV electron linac and an electron storage ring, Kyoto Storage Ring (KSR). He leaded activities in ICR by the Advanced Compact Accelerator Development Project by MEXT of Japanese Government on the construction of the Small Laser-equipped Storage Ring (S-LSR) and monochromization of laser-produced ions by RF phase rotation scheme. At S-LSR, great milestones of beam cooling, one-dimensional ordering of 7 MeV proton beam and efficient indirect transverse laser cooling by synchro-betatron resonant coupling were achieved.

Dr. Noda's educational contribution is also notable. In these years, he has supervised 14 graduate students 5 researchers for their doctor theses as a chief examiner. His students gained valuable experience concerning the whole system of the accelerator through the design and construction of the accelerator components and the experiments with the use of them under his dedicated supervision. His students assume important roles in many institutes in the accelerator society, such as KEK, JAEA, J-PARC, NIRS, JASRI and so on.

In addition to his own and collaboration research, his contribution to the accelerator and beam physics society was also significant. Dr. Noda promoted the launch of Beam Physics Division in the Physical Society of Japan as the chairman of the Japanese Beam Physics Club. He chaired the Scientific Programming Committee in the first International Particle Accelerator Conference (IPAC'10) held in Kyoto. His energetic commitment not only in the scientific program but also the hospitality led the conference to a great success as the largest accelerator conference ever held in Asia. He served as Editor in Chief of Japanese Journal of Applied Physics. Dr. Noda also improved international collaborations with BESSY, LNL, MPI-K, PAL, JINR and stimulated exchange of researchers between these institutes.

Dr. Noda's contribution to Kyoto University and the Institute through his scientific and educational activities is greatly acknowledged. His perpetual quest of the rule of nature will be remembered for a long time to come.